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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/972,155	10/09/2001	John Boyer	12-74 US	4939

25319 7590 07/29/2003

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EXAMINER	
PAIK, STEVE S	

ART UNIT	PAPER NUMBER
2876	

DATE MAILED: 07/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	09/972,155	BOYER ET AL.	
	Examiner	Art Unit	
	Steven S. Paik	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the corresp ndence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 June 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-8 and 10-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-8 and 10-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *8* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 5, 2003 has been entered.

Response to Amendment

2. Receipt is acknowledged of the Amendment filed June 05, 2003. The applicant cancelled claims 2, 9, and 19 and amended claims 1, 8, and 15.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 3-8, and 10-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (hereinafter, AAPA) in view of Iijima (US 5,161,256, cited by the applicant).

Re claims 1, 3, 4, 8, 10, 11, 15-17, and 18, AAPA discloses a method and apparatus for encoding information using an encoding standard, known as PKCS15 dictates how software keys and certificates are represented in terms of smart card files and directories (2nd paragraph on page

1). The PKCS15 compatible format for a smart card contains an Object Directory File. This file contains pointers to other directory files. A Certificate Directory File (CDF) is regarded as a directory of certificates known to the PKCS15 application and at least one CDF must be present on a smart card. The CDF contains certificates or references to certificates. A Data Object Directory (DODF) must be present on a smart card containing data objects (2nd paragraph on page 2 and see Fig. 1). AAPA further discloses a start and an end address, pointer, and a data object within a directory file

AAPA, however, fails to disclose the steps of storing the data object in at least a last available memory location within the directory file, the last available memory location nearer the start address of the directory file than earlier stored data object and storing pointer data in least a first available memory location most proximate the start address and between the start address and the end address.

Iijima discloses a technique for allocating file area in memory area of an IC card. Iijima teaches a data memory (16) such as an EEPROM storing various types of data (col. 3, ll. 42-54). As shown in Fig. 4, the memory 16 is divisionally defined as one common data file (CDF 21) used commonly in all applications, and a plurality of application data files (ADFs 22) independently used for each application. The CDF 21 and the ADFs 22 are defined by data file definition data 24 (functions as pointer) of a data file definition table 23. In this case, the data definition data is stored from the head address (start address) of the data memory 16. The CDF 21 and the ADFs 22 (data objects) are defined from the end address. This memory allocation method allows the maximum unused (available) memory space in the middle portion of the memory since the memory is used from the start address and the end address. Data file

definition data identify the next available storage location at the ends of the sequences, and thus define a free space in the middle of the data memory (col. 3, line 60- col. 4 line 3). This technique provides a user to achieve highly organized and efficient usage of the storage unit. Thus, resulting in saving cost of storage device such as a non-volatile memory shown in figure 4.

In view of Iijima, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to further employ a technique to maximize the capacity of a storage device in addition to the PKCS15 compatible format of AAPA due to the fact that more data objects can be stored in a storage medium for the purposes of saving the cost of a storage device and maximizing its capacity. Furthermore, such modification of employing a technique of storing objects at two sets of sequential addresses, one from the start and the other from the end, and creating one single block of unused memory in the middle, to the teachings of AAPA would have been an obvious matter of design variation, well within the ordinary skill in the art, and therefore an obvious expedient.

Regarding claims 5 and 12, AAPA in view of Iijima discloses the method and apparatus as recited in rejected claims 4 and 11 stated above respectively, wherein the last available memory location address is determined as the address within the last pointer data minus one address location (col. 3, lines 60-65 teaches the total assigned area head address data corresponds to a value obtained by incrementing the end address of the defined data file by one. Thus, if decrementing one address from the head address data is corresponding to the last available memory location in the middle).

Regarding claims 6 and 13, AAPA in view of Iijima discloses the method and apparatus as recited in rejected claims 1 and 8 stated above respectively, where the memory start address (22 in Fig. 1 of AAPA) is lower than the memory end address (24).

Regarding claims 7 and 14, AAPA in view of Iijima discloses the method and apparatus as recited in rejected claims 1 and 8 stated above respectively, where the memory start address (24 in Fig. 4 of Iijima) is higher than the memory end address (21) and wherein a forward direction in memory is from higher address values toward lower address values. A data object in a directory file may be retrieved by locating and reading an appropriate address. It is well known that a program can be set up with a particular reading direction of memory. For example, one can read from address 0000 to FFFF or vice versa according to design and programming specifications.

Response to Arguments

5. Applicant's arguments filed June 05, 2003 have been fully considered but they are not persuasive. The examiner carefully considered the Applicant's Remarks. Although IBM Technical Disclosure can still be used to disclose or fairly suggest an efficient memory management, the examiner has selected another prior art cited by the applicant, Iijima (US 5, 161,256) disclosing a memory allocation technique of an IC card. The newly cited reference appears to be curing the deficiency of identified problem in the prior art. Accordingly, claims 1, 3-8, and 10-18 are rejected under 35 U.S.C. § 103(a).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven S. Paik whose telephone number is 703-308-6190. The examiner can normally be reached on Mon - Fri (5:30am-2:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 703-305-3503. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-6893 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0530.

Steven S. Paik
Examiner
Art Unit 2876

ssp
July 21, 2003